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 <b>CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY</b> <b>AIR RESOURCES BOARD</b>	VOLVO CAR CORPORATION	<b>EXECUTIVE ORDER A-018-0111</b> New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles
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Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Div. 26, Part 5, Chap. 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-45-9;

**IT IS ORDERED AND RESOLVED:** That the following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	TEST GROUP	VEHICLE TYPE	EXHAUST EMISSION STANDARD CATEGORY	FUEL TYPE
2002	2VVXV2.92U8T	Passenger Car	Ultra Low Emission Vehicle (ULEV)	Gasoline
No.	EVAPORATIVE FAMILY (EVAP)	No.	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS (ECS)	* = not applicable
1	2VVXR0133AAA	1	TWC, HAFS, HO2S, SFI, TC, CAC, OBD (P)	TWC = 3-way catalytic converter O2S = oxygen sensor HO2S = heated O2S AFS/HAFS = air/fuel sensor (aka. universal O2S) / heated AFS MFI = multiport fuel injection SFI = sequential MFI TC/SC = turbo/supercharger CAC = charge air cooler OBD (F) / OBD (P) = on-board diagnosis; full / partial compliance (prefix) 2 = parallel (2) (suffix) = series
2	*	2	*	
3	*	3	*	
EVAP No.	ECS No.	ENGINE SIZE (L)	VEHICLE MAKES & MODELS	VEHICLES SUBJECT TO SFTP STANDARDS ARE UNDERLINED
1	1	2.9		<u>Volvo: S80 T8</u>
*	*	*		*

The exhaust and evaporative emission standards (STD) and certification emission levels (CERT) for the listed vehicles are as follows. Any debit in the manufacturer's compliance plan for "NMOG Fleet Average" (passenger cars and light-duty trucks) or "Vehicle Equivalent Credit" (medium-duty vehicles) shall be equalized as required. The 50° Fahrenheit standards and CERT levels are listed below or compliance has been met based on the manufacturer's submitted compliance plan in lieu of actual testing.

NMOG FLEET AVERAGE [g/mi]		NMOG [g/mi] @RAF = 0.94 CH4 RAF = *		CH4 = methane		NMOG = non-CH4 organic gas		NMHC = non-CH4 hydrocarbon		CO = carbon monoxide							
				NOx = oxides of nitrogen		HCHO = formaldehyde		PM = particulate matter		RAF = reactivity adjustment factor							
CERT	STD			CO [g/mi]		NOx [g/mi]		HCHO [mg/mi]		PM [g/mi]		Hwy NOx [g/mi]					
0.058	0.068	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD				
K = 1000 miles	@ 50K	0.032	0.040	0.2	1.7	0.04	0.2	1	8	*	*	0.00	0.3				
	@ 100K	0.041	0.055	0.3	2.1	0.1	0.3	1	11	*	*	0.00	0.4				
	@ 50°F, 4K	0.036	0.080	0.1	1.7	0.04	0.2	0.3	16	*	*	*	*				
CO [g/mi] @ 20°F, 50K		g = gram mg = milligram mi = mile		NMHC+NOx [g/mi] (composite)		NMHC+NOx [g/mi] [US06]		CO [g/mi] [US06]		NMHC+NOx [g/mi] [SC03]		CO [g/mi] [SC03]					
CERT	STD			CERT	STD	CERT	STD	CERT	STD	CERT	STD						
0.9	10.0																
F = degree Fahrenheit		@ 4K		*	*	0.08	0.14	0.3	8.0	0.005	0.20	0.1	2.7				
		@ 100K		*	*	*	*	*	*	*	*	*	*				
@ 100K	EVAPORATIVE FAMILY 1				EVAPORATIVE FAMILY 2				EVAPORATIVE FAMILY 3				EVAPORATIVE FAMILY 4				
	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	
	CERT	0.9	1.8	0.00	0.00	*	*	*	*	*	*	*	*	*	*	*	*
STD	2.0	2.5	0.05	0.20	*	*	*	*	*	*	*	*	*	*	*	*	*
2-D, 3-D [g/test] = 2-day, 3-day diurnal and hot-soak				RL [g/mi] = running loss				ORVR [g/gallon of fuel dispensed] = on-board refueling vapor recovery									

**BE IT FURTHER RESOLVED:** That for the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 (labeling), 1968.1 or 1968.1(m)(6.2) (on-board diagnostic systems; full or partial compliance), 2035 et seq. (emission control warranty), 2235 (fuel tank fill pipes and openings), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles).

**BE IT FURTHER RESOLVED:** That the listed vehicle models have been certified on the condition that the manufacturer provide all on-board diagnostic demonstration data required by 13 CCR Section 1968.1(g) by December 3, 2001. Failure to submit the required demonstration data by the specified date, or failure of the submitted demonstration data to show compliance with the test procedures, shall be cause for the Air Resources Board to revoke this Executive Order and vehicles sold under the revoked conditional certification shall be deemed uncertified.

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations. The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 23<sup>rd</sup> day of October 2001

  
 R. B. Summerfield, Chief  
 Mobile Source Operations Division